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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,580	02/09/2004	Bruce S. Jones	NUKZ 2 00339	3207
27885	7590	03/14/2007		
FAY SHARPE LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			EXAMINER MARTIN, LAURA E	
			ART UNIT	PAPER NUMBER
			2853	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/774,580

Applicant(s)

JONES, BRUCE S.

Examiner

Laura E. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-14, 16,17 and 19-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-14, 16-17, 19-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

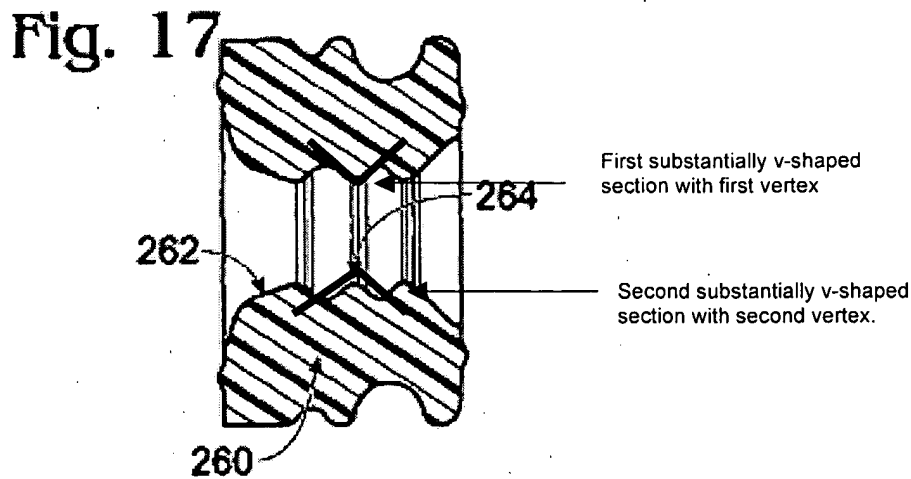
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7-14, and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinmetz et al. (US 2004/0021751) in view of Jones et al. (US 20020191059).

Steinmetz et al. discloses the following claim limitations:

As per claim 1: a housing having a chamber (figure 16, element 206) formed therein for receiving ink and a surface including an outlet passage (figure 21, element 158) communicating with the chamber through which the ink is dispensed; and a seal member (figure 17, element 260), said seal member comprising a substantially V-shaped (figure 17-see below) first surface having a first vertex and a substantially V-shaped second surface having a second vertex, wherein said surfaces are on opposite sides of said member, and said surfaces are adapted to be compressed when said seal member is installed in said outlet passage (figures 17 and 18, when the ball is placed in the seal, the seal must be compressed to prevent leakage, [0068]).



As per claim 11: the seal member engages an inner wall of said outlet passage (figure 17).

As per claim 23: a lower surface (figure 17, right side of element 260), an upper surface located on an opposite side of said seal member from said lower surface (figure 17, left side of element 260); an outer side wall extending between said lower and upper surfaces (figure 19, wall of fluid connector 202 extends between and outside of said upper and lower surfaces), said side wall having a tapered surface extending between and connecting said lower surface and said upper surface (figure 19, the side wall extends between said upper and lower surfaces; it has tapered surfaces that connects said upper and lower surfaces, as it creates a seal between the two surfaces), wherein said upper surface has a larger diameter than said lower surface (figure 18); wherein the lower and upper surfaces each comprised a raised portion extending across said surfaces (figures 17 and 18).

As per claim 24: the upper and lower portions are substantially v-shaped (figure 17 – see above).

As per claim 29: the upper and lower surfaces of the seal member together form a general toroidal-shaped portion (figures 17-20).

Steinmetz et al. does not disclose the following claim limitations:

As per claim 1: an air impermeable, non-porous seal member.

As per claims 7 and 25: the seal member is formed of a rubber.

As per claims 8 and 26: the seal member is formed of a polyvinyl chloride (PVC).

As per claims 9 and 27: the seal member is formed of a thermoplastic rubber.

As per claim 10: the seal member is formed of a silicone rubber.

As per claim 12: the seal member includes a thin membrane extending across the first surface of the seal member, said thin membrane adapted to be selectively pierced by a needle of an associated printer.

As per claims 13 and 23: the seal member has a substantially disk shape.

As per claim 14: the outlet passage includes a counterbore at an outer terminal end that receives the disk-shaped seal member therein.

As per claim 28: the seal member includes a thin membrane extending across an inner periphery, lower surface, of said seal member adjacent to a first surface of a seal member.

Jones et al. discloses the following claim limitations:

As per claim 1: an air impermeable, non-porous seal member [0007].

As per claims 7 and 25: the seal member is formed of a rubber [0008].

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As per claims 8 and 26: the seal member is formed of a polyvinyl chloride (PVC) [0008].

As per claims 9 and 27: the seal member is formed of a thermoplastic rubber [0008].

As per claim 10: the seal member is formed of a silicone rubber [0008].

As per claim 12: the seal member includes a thin membrane extending across the first surface of the seal member [0019], said thin membrane adapted to be selectively pierced by a needle of an associated printer [0003].

As per claims 13 and 23: the seal member has a substantially disk shape [0019].

As per claim 14: the outlet passage includes a counterbore at an outer terminal end that receives the disk-shaped seal member therein (claim 9).

As per claim 16: welding a cap member [0018].

As per claim 28: the seal member includes a thin membrane extending across an inner periphery, lower surface, of said seal member adjacent to a first surface of a seal member [0003] and [0019]; figure 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink container and method taught by Steinmetz et al. with the disclosure of Jones et al. in order to create a higher quality printing apparatus with better sealing properties.

Claims 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinmetz et al. (US 2004/0021751) and Jones et al. (US 20020191059), and further in view of Putman et al. (US 20030081085).

Steinmetz et al. as modified discloses the following claim limitations:

The ink container of claim 1 and the method of claim 18.

As per claim 5: Steinmetz et al. discloses the seal adapted to be linerally compressed between said cap (figure 1, element 268) and said outlet passage (figure 17 and [0068]).

Steinmetz et al. as modified does not disclose the following claim limitations:

As per claim 3: a cap member having a recess for receiving said outlet passage.

As per claim 6: the cap is formed of plastic.

Putman et al. discloses the following claim limitations:

As per claim 3: a cap member having a recess for receiving said outlet passage (figure 1, element 80).

As per claim 6: the cap is formed of plastic [0025].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink container and method taught by Steinmetz et al. as modified with the disclosure of Putman et al. in order to provide for a higher quality ink container with less leaking.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steinmetz et al. (US 2004/0021751) and Jones et al. (US 20020191059), and further in view of Qingguo et al. (US 20030128257) and Putman et al. (US 20030081085).

Steinmetz et al. as modified discloses the following claim limitations:

The ink container of claim 1 and the method of claim 18.

Steinmetz et al. as modified does not disclose the following claim limitations:

The outer terminal end of said outlet passage comprises a generally triangular-shaped rib extending at least partially along a circumference thereof for contacting and thermally bonding said cap to said outlet passage.

Qingguo et al. discloses the following claim limitations:

The outer terminal end of said outlet passage comprises a generally triangular-shaped rib extending at least partially along a circumference thereof (figure 7A).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink container taught by Steinmetz et al. as modified with the disclosure of Qingguo et al. in order to provide a better seal.

Putman et al. discloses the following claim limitations:

An outer terminal end of said outlet passage comprising a rib extending at least partially along a circumference thereof for contacting and thermally bonding said cap to said outlet passage [0021] and [0025] (the energy from ultrasonic welding produces heat).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink container and method taught by Steinmetz et al. as modified

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with the disclosure of Putman et al. in order to provide for a higher quality ink container with less leaking.

Claims 16, 17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qingguo et al. (US 20030128257) view of Putman et al. (US 20030081085).

Qingguo et al. discloses the following claim limitations:

As per claim 16: inserting a generally annular shaped seal (figure 16A, element 30) member into a counter bore (figure 16A, element 408) of said outlet port formed at an outer terminal end portion of said outlet port; placing a cap member (figure 16A, element 340) over said outer portion of said outlet port [0038].

As per claim 17: the seal member has substantially v-shaped first and second surfaces, wherein said substantially v-shaped surfaces are contacted by said cap (figure 16A, element 340) member and said outer terminal end portion (figure 16A, proximate element 56) of said outlet port during compression.

As per claim 19: the outer terminal end of said outlet passage comprises a generally triangular-shaped rib extending at least partially along a circumference thereof (figure 7A).

Qingguo et al. does not disclose the following claim limitations:

As per claim 16: welding the cap member to said outlet port.

As per claim 19: an outer terminal end of said outlet passage comprising a rib extending at least partially along a circumference thereof for contacting and thermally bonding said cap to said outlet.

As per claim 20: the seal member engages an inner wall of said outlet port.

As per claim 21: the seal member includes a thin membrane extending across an inner periphery of said seal member adjacent a first surface of the seal member.

As per claim 22: the seal member has a substantially disk shape.

Putman et al. discloses the following claim limitations:

As per claim 16: welding the cap member to said outlet port [0018].

As per claim 19: an outer terminal end of said outlet passage comprising a rib extending at least partially along a circumference thereof for contacting and thermally bonding said cap to said outlet passage [0021] and [0025] (the energy from ultrasonic welding produces heat).

As per claim 20: the seal member engages an inner wall of said outlet port (figure 2, element 28).

As per claim 21: the seal member includes a thin membrane extending across an inner periphery of said seal member adjacent a first surface of the seal member [0009].

As per claim 22: the seal member has a substantially disk shape (claim 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method taught by Qingguo et al. with the disclosure taught by Putman et al. in order to provide a higher quality sealing unit.

Response to Arguments

Applicant's arguments filed 1/19/2007 have been fully considered but they are not persuasive.

Applicant argues that Steinmetz et al. does not disclose a sealing member having a substantially v-shaped first and second vertex; however, the examiner would like to note that in the drawing above (after claim 1) the first and second v-shaped vertexes were highlighted.

Applicant argues that Steinmetz fails to disclose having an outer side wall having a tapered surface extending between and connecting the upper and lower surfaces; however, the examiner disagrees. The examiner would like to note figure 19, in which a wall around fluid connector 202 is extended into the cartridge. The wall extends both to the outside of the v-shaped surfaces (outer wall) and extends between the v-shaped surfaces.

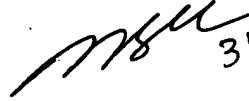
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin

 3/9/07
MANISH S. SHAH
PRIMARY EXAMINER